

ITS Field Operational Test Summary

Atlanta ATIS-KIOSK Project

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Introduction

The Atlanta Kiosk ITS Field Operational Test was the evaluation of an advanced traveler information system (ATIS) in Georgia. The purpose of the project was to provide the traveling public with a diverse base of pertinent information available through an easy-to-use interface located at many transportation interchanges. The kiosk system continued to operate after completion of the test and is available statewide through a system of over 130 kiosks. Available information includes route-maps, local attractions, real-time traffic and incident information, airport information, Metropolitan Atlanta Rapid Transit Authority (MARTA) information, and special events and Olympic Schedules (during the 1996 Summer Olympic Games).

Test personnel conducted data collection during the 1996 Olympic Games period in July and August 1996. A final evaluation report is expected in March 1998.

Project Description

As part of a larger ATIS project, the primary partners installed a network of 130 traveler information kiosks. Many of the kiosks were located in Atlanta but others were installed throughout the state. Kiosks were installed in locations through which travelers would be passing. These locations included MARTA stations, Hartsfield International Airport in Atlanta, interstate and highway rest areas, traveler welcome centers, and shopping and lodging centers. During the 1996 Olympic Games in Atlanta several kiosks were installed at Olympic Games Venues.

The kiosks provided users with up-to-date travel and event information. Each kiosk consisted of a power supply, climate control equipment (for those kiosks located outdoors), a computer, a touch screen monitor, and a printer, housed in a tall shell. The computer was connected to an information distribution network by a modem. A traveler could use the kiosk to obtain information on the best route to a destination, local attractions, real-time traffic and incidents, MARTA bus and train schedules, special events and Olympic Game Schedules (during the Games). Figure 1 shows a schematic of the kiosk system.

Travelers used a touch screen to interact with the kiosk. The computer displayed the information using a series of menu-driven screens. Travelers used a finger to touch buttons or menu choices displayed on the screen. The computer determined the location of the touch and displayed the appropriate information. Travelers could request a printed copy of some of the information.

Although test personnel completed data collection during the 1996 Summer Olympic Games, the system was not fully operational at that time. As a result, the data collected was not reflective of the full system. When the system was more fully operational, adequate funds were not available to resume data collection and the scope of the evaluation was reduced. The evaluation support

contractor is completing a reduced evaluation focused only on the nationally significant benefits of the system.

Test evaluators used a variety of methods to collect and analyze information about the four evaluation areas. Evaluators distributed questionnaires and conducted interviews and focus groups. They conducted observational studies of user interactions with the kiosks and used technical experts to assess environmental and ergonomic factors. Evaluators also conducted a limited literature review. The kiosks maintained transaction logs that recorded the amount and type of kiosk usage. Information and combinations of information from these sources enabled test personnel to judge the accomplishment of the objectives and to make recommendations concerning the kiosks.

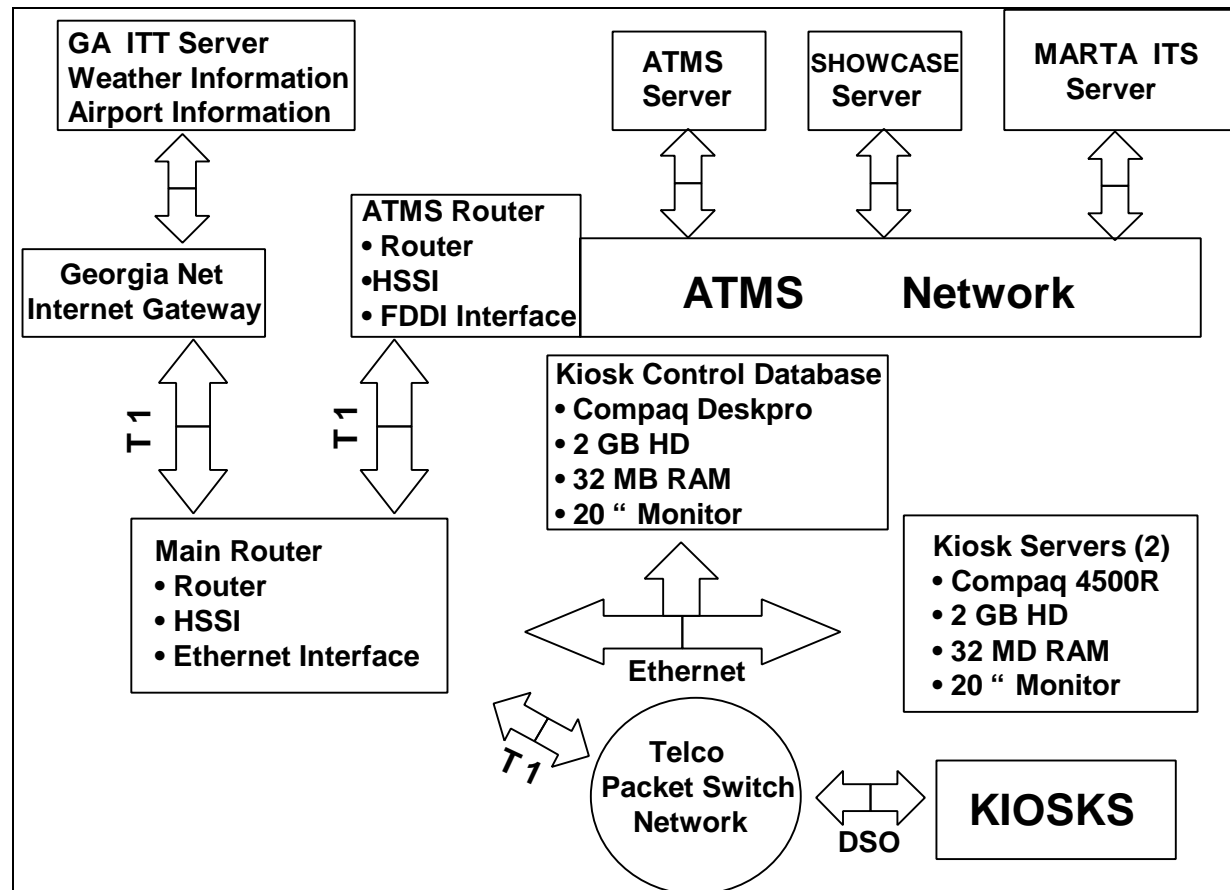


Figure 1: Atlanta Kiosk System Schematic

Results

The test evaluation was halted mid-way through its course, due to lack of funds. FHWA's evaluation support contractor developed and implemented a modified kiosk evaluation strategy. Under this strategy, the independent evaluator prepared only the User Acceptance Test Report.

The User Acceptance evaluation results reported principally on information gathered during the Olympics, but also included information collected at two tourist centers during the post-Olympic

period. Evaluation results were presented using a five point scale with five being most positive, three being neutral, and one being most negative.

During the Olympic period, users rated the kiosks as providing information that was valuable (3.89), usable (4.15), attractive (4.27), understandable (4.33), and reliable (4.06). Users' overall satisfaction was 3.93. Users were close to neutral (3.21) about changing plans as a result of kiosk interaction. The most frequently accessed category was weather conditions (51.3%), followed by Olympic information (50%), travel and tourism (46.7%), and traffic information (35.5%). More than 60% indicated they would pay up to 50 cents to use a kiosk equipped with a printer. Users generally liked the graphics, icons, and touch screen interface but disliked the slow response time and insensitivity of the touch screen.

Results from the tourist centers produced similar results, but were slightly less positive compared to the Olympic period experience. The categories of information accessed in the post-Olympic period differed slightly. At the tourist centers, users wanted travel and tourism information (65.2%), weather conditions (56.5%), and traffic information (43.8%).

Overall, travelers who used the kiosks found them user-friendly and useful. The percentage of usage, however, remained low, varying from 8.6% of possible users at one tourist center to 0.1% at a busy MARTA station. Kiosks appear to be most used in locations where travelers have more time to make decisions or explore alternatives.

The FHWA's support contractor is performing a limited additional analysis of information from the fully operational system. The contractor is obtaining data on current kiosk system usage. The contractor will prepare an evaluation report on various kiosk usage characteristics. This information will be of use to other ATIS implementations in the US and elsewhere.

Legacy

The test partners have continued to operate the kiosk system following completion of the test. They continue to provide updated information to the kiosks in real-time. The kiosks continue to attract roughly similar rates of usage and the partners plan to continue operating the system.

Test Partners

Clark Atlanta University

Concord Associates

Federal Highway Administration

Georgia Department of Transportation

Georgia Net

Georgia Tech Research Institute

JHK (Transcore)

References

None published.